Date: Mon,  5 Jul 93 04:30:02 PDT
From: Packet-Radio Mailing List and Newsgroup <packet-radio@ucsd.edu>
Errors-To: Packet-Radio-Errors@UCSD.Edu
Reply-To: Packet-Radio@UCSD.Edu
Precedence: Bulk
Subject: Packet-Radio Digest V93 #195
To: packet-radio

Packet-Radio Digest         Mon,  5 Jul 93       Volume 93 : Issue  195

Today's Topics:

advanced packet radio in Japan
Front End for FOSSIL and Packet
Help: KPC3 & com2
JNOS Devop
selecting configuration for JNOS

Send Replies or notes for publication to: <Packet-Radio@UCSD.Edu>
Send subscription requests to: <Packet-Radio-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Packet-Radio Digest are available
(by FTP only) from UCSD.Edu in directory "mailarchives/packet-radio".

We trust that readers are intelligent enough to realize that all text herein consists of personal comments and does not represent the official policies or positions of any party.  Your mileage may vary.  So there.

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Date: Sun, 4 Jul 93 11:54:23 GMT
From: koriel!sh.wide!wnoc-snd-ss2!sakunami!gatortia!wapiko!jf7pbw!jf7wex!
jf7wex@ames.arpa
Subject: advanced packet radio in Japan
To: packet-radio@ucsd.edu

Please allow me to write about our plans to experiment high speed digital communication over radio in Japan.

TNC

We have a type of TNC named "TNC-Z", developed by Masaaki YONEZAWA (JE1WAZ), using HD64180S(HITACHI), dedicated to kiss-mode.
It can handle up to 2Mbps differntial Manchester symbol (and NRZ/NRZI) at radio port. Because it aims to be used for multi mode of radio, only a outer MODEM is available.
PCB and diagram of TNC-Z have already distributed. Size of PCB is 4 x 3+3/8 (in inch).

## FSK

We have already experimented 64Kbps at 1200MHz for several times. At that time, a pair of IC-1200 is used for full-duplex. (It is hard to work for the RIG as both TX and RX concurrently.) The modulation was done directly at the VCO of the TX-RIG, (Because of PLL and not scrambled, we concluded to use that symbol.) and a small external circuit, using MC-3356P(MOTOROLA), which converts IF of IC-1200 (136MHz) below into 10.7MHz, filter it, and shape detected signal, for demodulation was prepared. The book "High-speed Packet TNC" which describes V.27ter, V.29, 64Kbps FSK, and already distributed PCB at that time for them has published with genny.or.jp, but sorry for only Japanaese edition is available.

RF part was further improved to be independent component separately from up-converter. The circuit and PCB, MC-2833P (MOTOROLA) as TX-part, the same 3356P added local osc (crystal controlled) and RF amp in as RX, also including PTT(RTS) control and voltage regulator, had developed by me. This RF PCB will be orderd soon. Size of this PCB is 4+3/4 x 3 (in inch).

No filter was used at that experiments because digital filter was not in time. Now, some prototypes have already built and evaluated. All digital filters had developed by Shin'ichi KANNO, JN1JDZ. He is selecting from among them and turning it to practical use. Odering its PCB is in progress.

## PSK (being planned out.)

Some kinds of suitable chip, dedicated to demodulate QPSK, are supplyed for consumer products. A kind is for NICAM, about 750Kbps. (728Kbps or 768Kbps??) Another is for also PCM audio channels of satelite broadcasting, 2.048Mbps. I found chips supplyed from TOSHIBA for each use, and from MICRONAS (Finnish company) for NICAM.

Problem still lies in modulating. I know some groups using looking-up EPROM and D/A, and existence of variously applicable chips, useful for this purpose, from RF MICRO DEVICES.

I think demodulator must be composed cheap and simply, but modulator is up to how construct. In case of using the RF-2802 or 2402, containing 90 degrees hybrid phase splitter and two balanced mixers, it is easy to do so. And the catalog says "Low Cost". I am interested in using them. Anyone used? How much did it cost?

## Protocol and software

We simultaniously reserch broadcasting-type protocol for scattering USENET compatible news, amprnet-JA, over radio.

Ryuji Suzuki, JF7WEX.
Packet Radio User's Group, PRUG

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Date: Sun, 04 Jul 93 10:14:15 MST
From: usc!elroy.jpl.nasa.gov!swrinde!gatech!asuvax!ennews!stat!
david@network.UCSD.EDU
Subject: Front End for FOSSIL and Packet
To: packet-radio@ucsd.edu

There has been some discussion lately in a fossil interface for TNC's ... I have found something that might be of interest. The file itself can be requested by sending email to:

file-request@stat.com

first line of text should be:

get /waffle/files/ham/fe.zip

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## FE - ComPort Monitor Software
Version 1.1

Copyright 1987, 1988, 1989 W. B. Fair, Jr.
All Rights Reserved

FE, short for Front End, is a program that is used to monitor and access the serial port of an MS-DOS system. It uses FOSSIL functions for some degree of system independence in serial port access.

FE features configurable serial port access, job scheduling and time dependent configurations, built-in monitor and terminal modes, DOS exit Errorlevels for modular use in batch file programming, and support for both telephone modems and ham radio terminal node controllers.

FE has been tested under MS-DOS 3.1, 3.2, and 3.3, under DesqView <tm> and DoubleDOS <tm> multitaskers. It has been used with AEA's PK-232 <tm> and MFJ's MFJ-1274 <tm> TNC in on-the-air testing for many months with not problems. It is meant to be used with the companion PBBS software.

FE may be freely distributed in unmodified form. You may change the archiving format to suit your tastes, but DO NOT screw with the executable code. If you find FE and the associated software to be of value, a contribution would be appreciated.

For additional information, ideas, thoughts, etc. contact W. B. Fair, Jr. (Skip KE5WJ). Gripes, complaints and flames can be sent elsewhere.

The ComPort BBS
FidoNet 1:390/1.0
300/1200/2400/9600 baud
Slidell, La.
(504) 643-6380

or

KE5WJ-2 PBBS
Slidell, La.
145.01 MHz Packet Radio

## QUICK INSTALLATION

If you just cannot read the rest of this documentation, here is a quick guide to installing and using FE. Reading the documentation, however is recommended.

1) First create a subdirectory for use by FE and copy all files in the archive into it. This subdirectory can also be used for other related BBS files.

2) Install your FOSSIL driver and make sure it is working. You are on your own with that task, since installation procedures vary and improvements are continually being made to the FOSSIL software. The most common FOSSILs used at this writing are Ray Gwinn's X00 (a device drive which goes into your Config.Sys) and Bob Hartman's OpusComm (a TSR).

3) Edit the file FE.CFG to your liking. There should be ample comments in the distribution file. Basically, you will want to determine the serial port and baud rate, enter a title for screen display, and determine whether terminal or monitor

modes are used on startup.

4) Make a batch file to run FE. You can run FE without a batch file, but that defeats it's purpose. A sample batch file called PKTBBS.BAT is included in the archive to get you going and show how it's done.

5) If you are using FE with a TNC, then make sure that the TNC serial interface to the computer is configured for the correct baud rate as specified in the FE.CFG file. It must also be set to 8 data bits, 1 stop bit, and NO parity.

6) Execute your batch file (PKTBBS or whatever you use) and make sure that the software finds everything in order. If it isn't, reread the above steps or read the documentation.

## CONFIGURATION FILE

By default FE uses a file called FE.CFG to determine its configuration information. If you want to use a different filename, the configuration file may be specified on the commandline. If you use FE.CFG, don't enter it on the commandline. See the commandline parameter section for more details.

The configuration file is a straight-forward ASCII text file and can be created and edited with any simple ASCII text editor. Be sure you save the file in ASCII, though. Control characters added by some word processors will cause trouble.

The format of the file is free format, for the most part. Any lines beginning with the characters @ # % * or ; are ignored and can be used as comment lines. Blank lines are also ignored and can be interspersed as desired for readability. Keywords are case insensitive; you can use upper, lower or mixed cases, as you prefer. Spaces between keywords and parameters are also ignored.

### TITLE
Everything after the space following the keyword TITLE is used as a title for screen display on the top line. You put whatever you like here, if you leave it out a line identifying the software will be used. The line should be less than 80 characters to display properly.

### PORT

The parameter following the keyword PORT is used to determine which serial port is to be used. At present the only acceptable values are 1 and 2, for COM1 and COM2, respectively. If you leave this out, the default value of COM1 is used. It can also be over-ridden by a commandline parameter.

BAUD

The parameter following the keyword BAUD determined the baud rate used for serial i/o. Valid numbers are 300, 1200, 2400, 4800, 9600, and 19200. If no valid value is used, 1200 baud is assumed. This can be over-ridden by a commandline parameter.

MONITOR

The MONITOR keyword is used to determine whether you want to monitor serial port data or not. When used with a TNC, setting MONITOR to ON lets you see what is happening on the channel. Valid parameters are ON and OFF; the default is ON.

TERMINAL

This keyword determines whether FE is initialized in TERMINAL mode or not. If set ON, FE will act like a dumb terminal program. For use with a PBBS, this is normally set OFF. Valid choices are ON and OFF; the default is OFF.

SOUND

NOSOUND

These keywords determine whether Ctrl-G (Bell) characters make a sound or not. If SOUND is used, whenever a Ctrl-G is monitored, a beep will sound. The default is NOSOUND, which ignores Ctrl-G's in monitored data.

EVENT

This keyword is used to specify the schedule used by FE. The following parameters specify the Days which the event is to be active, the start and stop time for the event, configuration to be used during the time period, and several DOS Errorlevels to be used on exit from FE during the time period. Valid Days are Mon, Tue, Wed, Thu, Fri, Sat, Sun, and All, however only All is guaranteed to work properly at present. Start and stop times are specified in 24 hour format. The first event should begin at 0000 and the last one should end at 2400. Overlapping times are not recommended.

The exit codes are specified in the form <X>=<N>, where <X> indicates the exit condition and <N> indicates the DOS Errorlevel to use on exiting. Note that DOS uses several errorlevels for its own purposes, so exit errorlevels less than 10 are not recommended. Valid exit conditions are I, which specifies an exit at the beginning of an event, B, which specifies an exit to load the BBS software, and M, which specifies an exit after recieving a mail transfer. It is up to your batch file to determine what actually happens when an exit occurs.

## COMMANDLINE

When FE is executed, it is able to determine some of it's parameters from the DOS commandline. The general form of the commandline is:

```
       FE [configfile] [-P1|2] [-Bn]
```

Note that all parameters are optional.

The first parameter allows a configuration file other thatn the default FE.CFG to be used. If you want to use the default FE.CFG, do not specify any configuration file on the commandline. The remaining parameters can appear in any order, but must begin with either a - or / character.

The P parameter allows you to over-ride the port specified in the configuration file. Valid parameters are -P1 or /P2 to select COM1, and -P2 or /P2 to select COM2.

The B parameter allows you to over-ride the baud rate specified in the configuration file. Valid values are 300, 1200, 2400, 4800 and 9600. For example to select 4800 baud, use -B4800 or /B4800.

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Internet: david@stat.com                  FAX: +1 (602) 451-6135
Bitnet: ATW1H@ASUACAD                     FidoNet=> 1:114/15
Amateur Packet ax25: wb7tpy@wb7tpy.az.usa.na

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Date: Sun, 4 Jul 1993 22:47:40 GMT
From: sgi!wdl1!wdl1!engle@ames.arpa
Subject: Help: KPC3 & com2
To: packet-radio@ucsd.edu

Todd W. Carter (tcarter@access.digex.net) wrote:

>: I have a KPC-3 that I am attempting to connect to my system. I have an
>: internal modem that uses com2 and an external port on com2 that I have
>: connected to the KPC-3.

>: Am I allowed to use the external port even if there's an internal board
>: that uses it (but obviously not at the same time)? My TNC program
>: (KaGold) won't recognize the connection and says there's a communications
>: problem.

>: What's the solution? I hope if doesn't mean I have to install a board to
>: get another serial port.

Multiplexing COM ports is possible but very confusing.

You can share COM1 with COM3 and have both use IRQ4
You can share COM2 with COM4 and have both use IRQ3

It is best (from a confusion reduction standpoint) to have no holes in using COM1-2-3-4, i.e., use COM1-2-3 not COM1-2-4. Your computer will always assign the third COM as COM3 no matter what IRQ and address you are using. So, while you think you are setting up COM4 the computer thinks it is COM3. Confusing huh? I finally gave up that game and switched the sharing to COM1.

You cannot share a mouse with anything else (that I have discovered). So, if the mouse is on COM1, move the mouse to COM2, and move the internal modem to COM1. Then you can share COM1 between the Modem and the TNC. You won't likely be using both at the same time.

Yes, this is a lot of hassle to get the stuff running. But, it is the only way I have been successful in making similar messes work.

You will need the manuals for the modem and the COM card to set the jumpers properly. I strongly recommend using MSD (Microsoft Diagnostics) to look at what you have the cards set at. This will help immensely in reducing the frustration. MSD is included with all windows 3.1 distributions (from Microsoft that is). Other good diagnostics are provided in QA-Plus. Try swapping the internal modem and what ever you currently have on COM1 (I have assumed it to be a mouse) first and get them working before you try to get the TNC working. Change as little as possible each time you try something. White down the answers the diagnostic tells you. However, REMEMBER the first COM is always COM1 and the second is always COM2, no matter how you have them configured by the jumpers.

Pull the modem out, leave it out for a while. Make the COM1 and COM2 swap that is noted above. This may only require you move the mouse to the connector on COM2 (all mouse programs I have used look on COM1 and COM2 for the mouse, automatically). Make sure that what what ever was moved to COM2 works fine. Then take the modem and switch it to use COM1 (my limited experience says internal modems can only be set to COM1 or COM2). (now you have the internal modem and COM1 using exactly the same address and IRQ [which is COM1]). Take the comm card, and using the manual, set its 1st comm port to COM3. Plug it in and run the diagnostics. The diags should show that you now have COM1-2-3, 1&3 sharing an IRQ but with different addresses. Now, if your communications program can handle a COM3, you should be able to get to your TNC through COM3. Use the power on message of the TNC to see if you have it right. Remember you will have to match the communications program speed with the speed of the TNC before characters will come out correct.

If you have never had the TNC working yet, pull the modem and make the TNC work on COM2 first. Otherwise, you won't know if you are fighting parameter settings or configuration jumpers. Write the parameters down when you get the TNC to work!

Did I say this was confusing? You bet I did, I only hope the tons of hours I have spent on trying to make this stuff work makes it easier for you.

Regards, Dave

--
David Engle, KE6ZE - engle@wdl.loral.com - 408/473-4419 @ work
Facts, what facts? I don't got to show you no stinking facts.
These are opinions expressed here.

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Date: 4 Jul 93 12:29:13 CST
From: usc!howland.reston.ans.net!darwin.sura.net!tulane!agwbbs!
Angelo_Glorioso_Iii@network.UCSD.EDU
Subject: JNOS Devop
To: packet-radio@ucsd.edu

HI All,

I have there was a newsgroup or mail list for Jnos users. Can someone please send me the info again..

73 de Angelo

-- Via DLG Pro v0.995

Internet:angelo_glorioso_III@agwbbs.new-orleans.LA.US
  Usenet:rex!agwbbs!angelo_glorioso_III
  Packet:N5UXT @ N5UXT.#NOLA.LA.USA.NA
  Tcp/ip:N5UXT.AMPT.ORG  [44.108.2.13]

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Date: Sun, 4 Jul 1993 07:11:35 GMT
From: psinntp!biztech!news@uunet.uu.net
Subject: selecting configuration for JNOS
To: packet-radio@ucsd.edu

I'm trying to compile JNOS using TC++ 3.0, and (as I was warned in the README) I was not able to link using the supplied config.h files, due to dgroup space limitations.

So, I went into config.h and undef'd a bunch of things I don't really need, including the bbs and netrom stuff.

Afterwards, I WAS able to link, but I had a few problems.  Any assistance would be greatly appreciated.

The problems are:

1) the executabe is huge (400+k)
2) it doesn't work (errors freeing unallocated memory, quickly followed by freezing).

I don't have pklite.  Is this a major problem, and if so, are there any options?  What exactly does pklite do?

Is there a trick to downsizing NOS other than modifying config.h??

Are there certain things which MUST be linked in?

Also, I am curious about the MULTITASK feature.  Does this mean that when shelling to DOS, NOS continues to run?

I have defined MULTITASK and undefined XSPAWN.

Thanks,
Ben Mehlman KB2ERP

bmehlman@biztech.com

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End of Packet-Radio Digest V93 #195
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